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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,286	07/06/2006	Dieter Funk	021500-143	1547

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EXAMINER

SZEWczyk, CYNTHIA

ART UNIT	PAPER NUMBER
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1791

NOTIFICATION DATE	DELIVERY MODE
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03/17/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/551,286	Applicant(s) FUNK ET AL.	
	Examiner CYNTHIA SZEWCZYK	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-7 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WRIGHT (US 3,374,078) in view of LEHTO et al. (US 5,079,931).

WRIGHT teaches an apparatus for supporting and heating glass sheets on a gas bed. WRIGHT teaches the device comprises a chamber (28 in figure 2) connected to a source of compressed gas (46 in figure 2), wherein the chamber includes an upper wall (20 in figure 2) with dimensions to the outline of a glass sheet (see figure 1) having a plurality of apertures having an entry bore with progressively widening hole (34 in figure 3). Figure 2 shows that the holes (34) are in fluid communication with the source of gas (46). WRIGHT discloses that the bed may have different patterns of aperture arrangement (col. 6 lines 11-15).

LEHTO teaches a support mould for glass sheets. LEHTO teaches that a greater blasting air thermal effect is required in the areas subjected to the greatest deformation of a glass sheet (col. 3 lines 38-41). Therefore, by the teaching of LEHTO, more blasting of air in the edges would produce more deformation (i.e. bending or curving) in the edges of glass sheets (col. 3 lines 38-55). It would have been obvious to one of ordinary skill in the art to use such an aperture pattern in WRIGHT because WRIGHT discloses that a desired finished

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product of WRIGHT is automobile windows, which would require more curving in the edges.

Regarding claim 2, WRIGHT does not specify a specific central zone, however a person of ordinary skill would be able to identify an area of the bed as the central zone such that the area is equal to that of the edges.

Regarding claim 3-5, WRIGHT discloses an example wherein the diameters of the exhaust holes vary depending on the zone of the glass (col. 4, lines 62-73). It would have been obvious to one of ordinary skill in the art that the same variable diameter arrangement could be applied to the gas inlet holes to provide adequate and uniform gas support for the glass sheet (col. 4, lines 73-75). It would have been obvious to one of ordinary skill in the art that the air inlet holes could have been adjusted to achieve the ranges of instant claims 3-5.

Regarding claim 6, it also would have been obvious to one of ordinary skill in the art that the holes could have been adjusted such that the degree of perforation decreased from the feed side of the glass to the other side. Therefore, the claimed invention would have been obvious.

Regarding claim 7, figure 3 shows that the entry bore of the nozzle (34) widens abruptly in the direction of the flow of the gas.

Regarding claim 13, WRIGHT discloses that the chamber is made of ceramic material (col. 4, lines 10-12).

Regarding claim 14, figure 1 shows that the chamber (20) is designed as a one piece moulding.

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Regarding claim 15, WRIGHT discloses that the chamber is provided with heating elements (25 in figures 1 and 2).

Regarding claim 16 and 17, see the discussion of claims 3-5.

3. Claims 8-10, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over WRIGHT (US 3,374,078) in view of LEHTO et al. (US 5,079,931) as applied to claims 1-7 and 13-17 above, and further in view of CARLOMAGNO et al. (US 5,336,288).

WRIGHT as modified by LEHTO teaches an apparatus for supporting and heating glass sheets on a gas bed. Modified WRIGHT is silent to the air nozzle containing three cylindrical components.

CARLOMAGNO et al. discloses an apparatus for the manufacture of glass sheets using a glass cushion. Figure 4 of CARLOMAGNO et al. discloses that the nozzle has several sections of different diameters. CARLOMAGNO discloses that the first cylindrical section (57) has a diameter of 2 to 8 mm (col. 5, lines 47-48) which incorporates the range of instant claim 8. It would have been obvious to one of ordinary skill in the art that the nozzle of CARLOMAGNO could have been used as the nozzle of modified WRIGHT because modified WRIGHT discloses that the nozzles need only be a chamfered or beveled shape (col. 4, lines 25-26), which the nozzle of CARLOMAGNO would provide.

Regarding claim 8, WRIGHT discloses that the nozzle opens up to a diameter of 3/8 inch (col. 4, lines 28), or 9.525 mm, which would be considered the third section. It would have been obvious to one of ordinary skill in the art

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that the second section would have a diameter greater than this value, but less than the maximum value disclosed by CARLOMAGNO, which is 100 mm (col. 4, lines 49-50).

Regarding claim 9, see the discussion of claim 8.

Regarding claim 10, figure 4 of CARLOMAGNO also shows that the cylindrical sections contain a coinciding cylinder axis.

Regarding claim 18, WRIGHT discloses that the first section of the nozzle may be 1/8 inch diameter, or 3.175 mm.

Regarding claim 19, see the discussion of claim 10.

4. Claims 11, 12, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WRIGHT (US 3,374,078) in view of LEHTO et al. (US 5,079,931) as applied to claims 1-7 and 13-17 above, and further in view of SCHWARTZ et al. (US 2004/0226318 A1).

WRIGHT as modified by LEHTO teaches an apparatus for supporting and heating glass sheets on a gas bed. Modified WRIGHT is silent to placing a cloth on the upper wall. SCHWARTZ et al. discloses an apparatus and method for bending glass. SCHWARTZ et al. discloses that the mold can be covered in a heat resistant fabric in order to avoid marking the surface of the glass (para. 25, lines 1-3) and to protect the mold. SCHWARTZ et al. discloses that the fabric can be air permeable (para. 17, lines 20-24) and that a stainless steel can be used as a material for the cloth (claim 14). It would have been obvious to one of ordinary skill in the art to use the cloth of SCHWARTZ et al. on the bed of

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modified WRIGHT because it would still allow gas to flow through but would protect the glass from getting marked. Therefore, the claimed invention would have been obvious.

Response to Arguments

5. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant argues that WRIGHT does not teach an aperture pattern wherein the outer periphery has a higher degree of perforation than the center, however, in the new rejection presented above, WRIGHT has been combined with LEHTO to teach this limitation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CYNTHIA SZEWCZYK whose telephone number is (571)270-5130. The examiner can normally be reached on Monday through Thursday 7:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CS

/Eric Hug/
Primary Examiner, Art Unit 1791